

REMARKS

Claims 1-30 are pending, with claims 1, 2, 9, and 10 being independent. Claims 1, 2, 9, 10, and 17-20 have been examined and claims 3-8, 11-16, and 21-30 were withdrawn from consideration due to a previous restriction requirement.

Claims 1, 2, 9, 10, and 17-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' Prior Art (APA) in view of Asano (5,409,867) and further in view of Miyao (4,599,133). With respect to independent claims 1, 2, and 9, applicants respectfully traverse this rejection. With respect to independent claim 10, applicants have amended claim 10 to obviate this rejection.

Claims 1 and 2, and amended claim 10 recite a method for manufacturing a semiconductor device having at least one thin film transistor that includes, among other features, irradiating the semiconductor layer with a laser beam to crystallize a semiconductor layer, where the irradiation of the semiconductor layer is conducted in such a manner that the semiconductor layer is scanned with the laser beam in parallel with a carrier flow direction in the channel region. Claim 9 recites a method for manufacturing a semiconductor device having at least one thin film transistor that includes, among other features, irradiating the semiconductor layer with a laser beam to crystallize a semiconductor layer while moving the substrate in a direction approximately perpendicular to a lengthy direction of the linear laser beam.

Applicants respectfully request reconsideration and withdrawal of this rejection because APA, Asano, and Miyao, either alone in combination, fail to describe or suggest irradiating the semiconductor layer with a laser beam to crystallize a semiconductor layer in such a manner that there is a relationship between the irradiating direction and the carrier flow direction. More specifically, with respect to claims 1, 2, and 10, the references fail to describe or suggest irradiating the semiconductor layer in such a manner that the semiconductor layer is scanned with the laser beam in parallel with a carrier flow direction in the channel region. With respect to claim 9, the references fail to describe or suggest irradiating the semiconductor layer with a

laser beam to crystallize a semiconductor layer while moving the substrate in a direction approximately perpendicular to a lengthy direction of the linear laser beam.

As acknowledged in the Office Action, APA fails to describe or suggest scanning a semiconductor layer with a linear laser beam in parallel with a carrier flow direction in the channel region. See Office Action, p. 3, lines 5-8. Asano does not remedy this failure of APA.

Instead, Asano merely illustrates moving the substrate in one direction and, in a direction normal to the direction in which the substrate was moved, irradiating the substrate with a light beam. See Asano, Fig. 1(b) and col. 2, lines 59-68. Asano does not describe any relationship between the irradiating direction and the carrier flow direction, and Asano is unclear as to how these moving directions are related to a carrier flow direction in the channel region. Furthermore, although a carrier flow direction may include a direction in which a carrier flows from a source region to a drain region, Asano does not disclose any process for forming the source and drain regions, and thus, does not describe any relationship between the irradiating direction and the carrier flow direction.

Moreover, the other relied upon sections of Asano (col. 3, lines 63-68 and col. 4, lines 1-22) do not describe or suggest any relationship between the irradiating direction and the carrier flow direction. Although it is appreciated that the active region of Asano would include a channel region and source and drain regions, Asano does not describe or suggest how the active region should be arranged with respect to the irradiating direction.

Miyao does not remedy the failure of APA and Asano with respect to these recited features and, notably, is not relied upon in the Office Action for these features.

For at least these reasons, applicants respectfully request withdrawal of the § 103(a) rejection of claims 1, 2, 9, and 10, and their dependent claims 17-20.

Claims 1, 2, 9, 10, and 17-20 also stand rejected under 35 U.S.C. § 103(a) as being unpatentable over APA in view of Asano and further in view of Morita (4,468,853). With respect to independent claims 1, 2, and 9, applicants respectfully traverse this rejection. With respect to independent claim 10, applicants have amended claim 10 to obviate this rejection.

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For the reasons discussed above, APA and Asano, either alone or in combination, fail to describe or suggest the recited features of independent claims 1, 2, 9, and 10. Furthermore, Morita does not remedy this failure of APA and Asano and, notably, is not relied upon in the Office Action for doing so. Accordingly, applicants respectfully request withdrawal of this rejection of claims 1, 2, 9, and 10, and their dependent claims 17-20.


Applicants submit that all claims are in condition for allowance.

Enclosed is a \$110 check for the Petition for Extension of Time fee. During prosecution of this application, please apply any deficiencies or credits to deposit account 06-1050.

Respectfully submitted,

Date: _____

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